NRCS Natural Resources Conservation Service

Alderson Plant Material Center

Critical Area Planting

Beechgrass Planting

WV Conservation Practice Job Sheet ***Code 342***

DEFINITION

Critical area planting consists of planting vegetation on highly erodible or critically eroding areas. Examples of critical areas are on dams, dikes, diversions, grassed waterways, mine spoil, levees, cuts, fills, borrow areas, surface-mined areas, road banks, and denuded or gullied areas where vegetation is difficult to establish by normal planting methods.

PURPOSE

This practice is applied as part of a conservation management system to support one or more of the following:

- Stabilize areas with existing or expected high rates of soil erosion by water.
- Restore degraded sites that cannot be stabilized through normal methods.

CONDITION WHERE PRACTICE APPLIES

American beachgrass may be used for initial stabilization of areas having high salinity levels and dry conditions. In addition, it may also be utilized to stabilize mine spoil sites that have low pH or other characteristics that make them difficult to vegetate.

American beachgrass is a native, leafy, spreading, rhizomatous, bunch grass with many stems per clump. It may reach a height of two to three feet. The seed head is a spike-like panicle, about 10 inches long, and appears in late July or August. Leaves are long and narrow, and may become rolled or folded as the plant matures. Its vigorous growth enables the plant to withstand heavy deposits of loose soil and grow up through it.

It is native to the mid-Atlantic coastal region from Maine to North Carolina, and the Great Lakes Region. It will grow on sandy or other coarse textured soils on inland sites with or without high salinity, provided supplemental fertilizers are applied. The plant requires a sunny position in well drained soil and is very tolerant of xeric soil moisture regimes. This grass does not tolerate much soil moisture before it begins showing signs of stress.

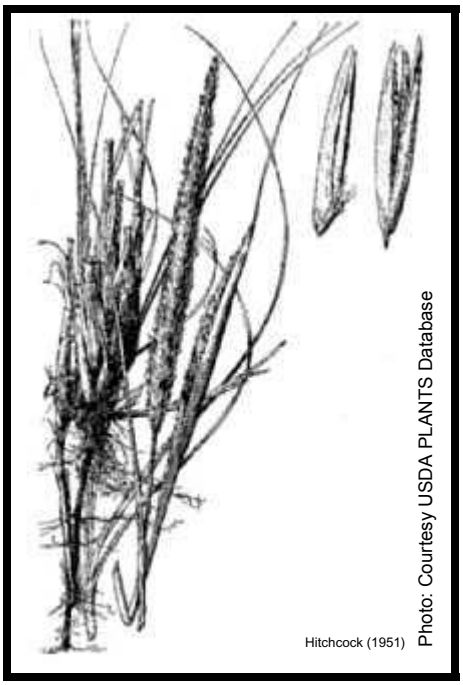
CRITERIA

Site Preparation

Where feasible, the site should be graded and smoothed with a bulldozer, grader or other suitable earthmoving equipment. Sources of overhead water should be eliminated and/or controlled to prevent erosion and mass wasting during the establishment phase of the planting.

Seedbed Preparation

Secondary tillage to loosen the soil prior to planting is usually not necessary or recommended.



Establishment

The best time to plant beachgrass is from October 1 to March 30 in the mid-Atlantic Region. If properly planted, good survival can be expected any time during this period, except when soil is frozen. Summer plantings are not satisfactory.

American beachgrass can be planted either by hand or by mechanical equipment designed for this work. Stems (culms) are used for planting stock. For erosion control and cover applications, two or more 18 to 24 inch long culms are mechanically or hand placed per planting hole. Planting holes are typically spaced 18 to 24 inches apart. Stagger the plantings in alternate rows to provide maximum erosion control. An 18" by 18" spacing at 2 culms per hole requires 38,720 culms per acre; or about 900 culms per 1,000 square feet.

Beachgrass culms must be planted at least 8" deep. This prevents plants from drying out, as well as being blown out by the wind. A ditching spade or tree planting (dibble) bar are excellent tools for opening the planting hole. The culms and roots must be kept moist before and during planting. Success of planting will increase if the stock is kept dormant or has made very little growth. A small amount (0.5 ounce or 15 grams) of a complete analysis, inorganic fertilizer placed directly in the hole at planting will improve plant establishment. Use of a slow release fertilizer high in nitrogen at planting is strongly recommended (N-P-K analysis of 20-4-8, 16-8-12, 20-10-5 or similar analyses, if available).

OPERATION AND MAINTENANCE

Properly applied fertilizer is the key to vigorous growth of newly established stands of American beachgrass. Applications providing between 30 and 60 pounds of actual nitrogen per acre annually are adequate. These annual fertilizer amounts are more effective if split into a spring and early summer application. The spring application should be applied no earlier than April 1. Once the stand is well established, the rate of fertilizer applied can be reduced by half, or applied only when the stand appears to be weakening.

Foot or vehicular traffic that bends or breaks the culms will seriously damage or kill the plants. Replanting stands of beachgrass where openings or voids have developed should be an annual maintenance procedure, and exclusion of traffic with fencing is strongly advised.

References

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Hitchcock, A.S. 1951. *Manual of the grasses of the United States*. Miscellaneous Publication No. 200. USDA, Washington, D.C. 1051 pp.

Radford, A.E., H.E. Ahles, & C.R. Bell 1968. *Manual of the vascular flora of the Carolinas*. The University of North Carolina Press, Chapel Hill, North Carolina. 1183

Selisker, D.M. 1995. *Coastal dune restoration: A strategy for alleviating dieout of Ammophila breviligulata*. Restoration Ecology 3(1):54-60.

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Specifications

342 Critical Area Planting - Beachgrass Planting - WV Job Sheet

Site-specific requirements are listed on the specification sheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide and the Critical Area Planting practice standard (342). Information on this job sheet is considered to be part of the conservation plan.

Client:	**Farm #:**
Field(s):	**Tract #:**
Designed By:	**Date:**

Purpose (check all that apply)	
☐ Stabilize areas with existing or expected high rates of soil erosion by water	☐ Restore degraded sites that cannot be stabilized through normal methods
☐ Vegetate mine spoil site	☐ Other (specify):

Layout	**Field _____**	**Field _____**	**Field _____**
Total Area Planted (acres)			
Site Slope [1]			
Site/Seedbed Preparation Method [2]			
Planting Date			
Planting Method [3]			
Total Stems (per acre)			
Stems (culms) per Hole			
Stem (culm) length			
Spacing (stagger rows for maximum erosion control)			
Supplemental Nutrients for Establishment [4] (0.5 oz or 15g per hole)			
Use Exclusion is Required [5]			

[1] Indicate the approximate site slope. **NOTE:** Machinery should only be operated on slopes flatter than 3:1.

[2] List the site/seedbed preparation method to be used: **Heavy Equipment, Hand,** or **Other.** Refer to the "Site Preparation" section of this job sheet for specific instructions.

[3] Identify how the vegetation is to be established: **Hand**, or **Mechanical**.

[4] Indicate what fertilizer analysis is to be used at the 0.5 oz or 15g/hole rate. For example 20-4-8

[5] Refer to (472) Use Exclusion or associated job sheets for more information.

342 Critical Area Planting – Beachgrass Planting - WV Job Sheet

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Refer to the conservation plan map for locations

Additional Notes, Specifications, Operation and Maintenance Requirements, etc.

Apply fertilizer to ensure vigorous growth of newly established stands of American beachgrass. Apply between 30 and 60 pounds of actual nitrogen per acre annually. Split annual fertilizer treatment into a spring and early summer application. The spring application should be applied no earlier than April 1. Once the stand is well established, the rate of fertilizer applied can be reduced by half, or applied only when the stand appears to be weakening.

Foot or vehicular traffic that bends or breaks the culms will seriously damage or kill the plants. Replant stands of beachgrass where openings or voids have developed. Exclude livestock and foot or vehicular traffic as needed.

Additional Notes:

For more information concerning this practice contact:

_____ **at** _____